

Kenji Kikuchi

List of Publications by Year in descending order

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121
papers

2,112
citations

257450

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265206

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docs citations

125
times ranked

1765
citing authors

#	ARTICLE	IF	CITATIONS
1	Rheotaxis and migration of an unsteady microswimmer. <i>Journal of Fluid Mechanics</i> , 2022, 930, .	3.4	13
2	Influence of Respiratory Gas Density on Tidal Volume during Mechanical Ventilation: A Laboratory Investigation and Observational Study in Children. <i>Tohoku Journal of Experimental Medicine</i> , 2022, 256, 271-281.	1.2	3
3	Flexible and Tough Superelastic Co-Cr Alloys for Biomedical Applications. <i>Advanced Materials</i> , 2022, 34, e2202305.	21.0	11
4	Melting Point of Pure Cr and Phase Equilibria in the Cr-Si Binary System. <i>Journal of Phase Equilibria and Diffusion</i> , 2022, 43, 229-242.	1.4	2
5	Cilia and centrosomes: Ultrastructural and mechanical perspectives. <i>Seminars in Cell and Developmental Biology</i> , 2021, 110, 61-69.	5.0	18
6	Martensitic Transformation and Metamagnetic Transition in Co-V-(Si, Al) Heusler Alloys. <i>Metals</i> , 2021, 11, 226.	2.3	3
7	Orientation Dependence of Plasticity and Fracture in Single-Crystal Superelastic Cu-Al-Mn SMA Bars. <i>Journal of Materials in Civil Engineering</i> , 2021, 33, .	2.9	13
8	BCC-HCP-FCC Multiple Transformations and $\hat{\mu}$ Loop in the Fe-Cr-Co-Mn System. <i>Journal of Phase Equilibria and Diffusion</i> , 2021, 42, 735-747.	1.4	0
9	Non-biodegradable objects may boost microbial growth in water bodies by harnessing bubbles. <i>Royal Society Open Science</i> , 2021, 8, 210646.	2.4	3
10	Effect of Al Content on Abnormal Grain Growth and Superelasticity in Fe-Mn-Al-Cr-Ni Shape Memory Alloys with Near-Zero Temperature-Dependence of Transformation Stress. <i>Shape Memory and Superelasticity</i> , 2021, 7, 402-413.	2.2	5
11	Microbial Brazil nut effect. <i>Soft Matter</i> , 2021, 17, 10428-10436.	2.7	2
12	Impact of rheological properties on bacterial streamer formation. <i>Journal of the Royal Society Interface</i> , 2021, 18, 20210546.	3.4	4
13	Elasto-hydrodynamic interaction of two swimming spermatozoa. <i>Physics of Fluids</i> , 2020, 32, .	4.0	19
14	Vulnerability of the skin barrier to mechanical rubbing. <i>International Journal of Pharmaceutics</i> , 2020, 587, 119708.	5.2	15
15	Iron-based superelastic alloys with near-constant critical stress temperature dependence. <i>Science</i> , 2020, 369, 855-858.	12.6	77
16	Elastocaloric switching effect induced by reentrant martensitic transformation. <i>Applied Physics Reviews</i> , 2020, 7, .	11.3	22
17	Harnessing random low Reynolds number flow for net migration. <i>Physical Review E</i> , 2020, 101, 063101.	2.1	2
18	The shape-effect of flagella is more important than bottom-heaviness on passive gravitactic orientation in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	9

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19	How do <i>C. elegans</i> worms survive in highly viscous habitats?. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	1
20	Mechanical roles of anterograde and retrograde intestinal peristalses after feeding in a larval fish (<i>Danio rerio</i>). <i>American Journal of Physiology - Renal Physiology</i> , 2020, 318, G1013-G1021.	3.4	5
21	Machine learning assisted design of γ -strengthened Co-base superalloys with multi-performance optimization. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	56
22	Bacterial biomechanics—From individual behaviors to biofilm and the gut flora. <i>APL Bioengineering</i> , 2020, 4, 041504.	6.2	10
23	The bubble-induced population dynamics of fermenting yeasts. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20200735.	3.4	5
24	Orientation Dependence of Superelasticity and Stress Hysteresis in Cu-Al-Mn Alloy. <i>Materials Transactions</i> , 2020, 61, 55-60.	1.2	13
25	Texture Formation in a Polycrystalline Fe-Ni-Co-Al-Ti-B Shape Memory Alloy. <i>ISIJ International</i> , 2020, 60, 2973-2982.	1.4	5
26	Bio-imaging pioneers Newly Bio-fluidmechanics. <i>The Proceedings of Autumn Conference of Tohoku Branch</i> , 2020, 2020.56, s3.	0.0	0
27	Shear-induced migration of a transmembrane protein within a vesicle. <i>The Proceedings of the JSME Conference on Frontiers in Bioengineering</i> , 2020, 2020.31, 2A24.	0.0	0
28	Swimming mediated by ciliary beating: comparison with a squirmer model. <i>Journal of Fluid Mechanics</i> , 2019, 874, 774-796.	3.4	36
29	Swimming of Spermatozoa in a Maxwell Fluid. <i>Micromachines</i> , 2019, 10, 78.	2.9	12
30	Effects of Liquid Indium Particles on Recrystallization and Grain Growth of δ -Fe in Fe-In Alloys. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2019, 83, 166-175.	0.4	0
31	Depth measurement of molecular permeation using inclined confocal microscopy. <i>PLoS ONE</i> , 2019, 14, e0214504.	2.5	4
32	Cryogenic Superelasticity and Concomitant Elastocaloric Effect. <i>Materia Japan</i> , 2019, 58, 44-46.	0.1	1
33	Viscous Effect of Filter Feeding on <i>C. elegans</i> . <i>The Proceedings of the JSME Conference on Frontiers in Bioengineering</i> , 2019, 2019.30, 2B14.	0.0	0
34	Development of mechanical model for nodal cilia axoneme. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2019, 2019.32, 1G33.	0.0	0
35	Abnormal Grain Growth Induced by Cyclic Heat Treatment and Fabrication of Cu-Based Shape Memory Alloy Single Crystal. <i>Materia Japan</i> , 2019, 58, 137-143.	0.1	0
36	Biomechanics of <i>Tetrahymena</i> escaping from a dead end. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20172368.	2.6	9

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37	Elastohydrodynamic phase-lock in two rotating cilia. Journal of Biomechanical Science and Engineering, 2018, 13, 17-00467-17-00467.	0.3	2
38	Collective spreading of red blood cells flowing in a microchannel. Journal of Biomechanics, 2018, 69, 64-69.	2.1	4
39	Cryogenic superelasticity with large elastocaloric effect. NPG Asia Materials, 2018, 10, e457-e457.	7.9	42
40	Effect of Thermomechanical Processing on Texture and Superelasticity in Fe-Ni-Co-Al-Ti-B Alloy. Shape Memory and Superelasticity, 2018, 4, 102-111.	2.2	15
41	Burst mode pumping: A new mechanism of drinking in mosquitoes. Scientific Reports, 2018, 8, 4885.	3.3	17
42	Biaxial fluid oscillations can propel a microcapsule swimmer in an arbitrary direction. Physical Review E, 2018, 98, .	2.1	5
43	Effects of Liquid Indium Particles on Recrystallization and Grain Growth of $\hat{\pm}$ Fe in Fe-In Alloys. Materials Transactions, 2018, 59, 188-197.	1.2	0
44	Passive swimming of a microcapsule in vertical fluid oscillation. Physical Review E, 2018, 98, 023108.	2.1	8
45	Simulation of the nodal flow of mutant embryos with a small number of cilia: comparison of mechanosensing and vesicle transport hypotheses. Royal Society Open Science, 2018, 5, 180601.	2.4	12
46	Cyclic Properties of Superelasticity in Cu-Al-Mn Single-Crystalline Sheets with Bainite Precipitates. Shape Memory and Superelasticity, 2018, 4, 428-434.	2.2	6
47	Martensitic Transformation and Superelasticity in Fe-Mn-Al-Based Shape Memory Alloys. Shape Memory and Superelasticity, 2017, 3, 322-334.	2.2	35
48	Ultra-large single crystals by abnormal grain growth. Nature Communications, 2017, 8, 354.	12.8	135
49	Stress- and Magnetic Field-Induced Martensitic Transformation at Cryogenic Temperatures in Fe-Mn-Al-Ni Shape Memory Alloys. Shape Memory and Superelasticity, 2017, 3, 467-475.	2.2	12
50	Effect of Fluid Viscosity on the Cilia-Generated Flow on a Mouse Tracheal Lumen. Annals of Biomedical Engineering, 2017, 45, 1048-1057.	2.5	14
51	Dynamic Recovery and Superelasticity of Columnar-Grained Cu-Al-Mn Shape Memory Alloy. Metals, 2017, 7, 141.	2.3	15
52	Inhomogeneous distribution of <i>Chlamydomonas</i> in a cylindrical container with a bubble plume. Biology Open, 2016, 5, 154-160.	1.2	8
53	Martensitic Transformations and Superelastic Behavior at Low Temperatures in Ti ₅₀ -Ni ₄₀ -Cu ₁₀ Shape Memory Alloys. Materials Transactions, 2016, 57, 269-277.		
54	Giant elastocaloric effect covering wide temperature range in columnar-grained Cu _{71.5} Al _{17.5} Mn ₁₁ shape memory alloy. APL Materials, 2016, 4, 106106.	5.1	79

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55	A jumping shape memory alloy under heat. Scientific Reports, 2016, 6, 21754.	3.3	23
56	Nutrient uptake in a suspension of squirmers. Journal of Fluid Mechanics, 2016, 789, 481-499.	3.4	10
57	Cell adhesion during bullet motion in capillaries. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H395-H403.	3.2	32
58	Magnetic Properties and Phase Diagram of Ni ₅₀ Mn _{50-x} Ga _{x/2} In _{x/2} Magnetic Shape Memory Alloys. Shape Memory and Superelasticity, 2016, 2, 371-379.	2.2	2
59	Upward swimming of a sperm cell in shear flow. Physical Review E, 2016, 93, 032402.	2.1	30
60	A numerical model of a red blood cell infected by <i>Plasmodium falciparum</i> malaria: coupling cell mechanics with ligand-receptor interactions. Science and Technology of Advanced Materials, 2016, 17, 454-461.	6.1	5
61	Deformation of a micro-torque swimmer. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150604.	2.1	6
62	Response to the Letter to the Editor "Hemodynamics in the Microcirculation" by A. G. Koutsiaris. Annals of Biomedical Engineering, 2016, 44, 1323-1323.	2.5	0
63	Microstructure and Mechanical Properties in B-Doped Fe-31.9Ni-9.6Co-4.7Ti Alloys. Shape Memory and Superelasticity, 2016, 2, 228-234.	2.2	7
64	<i>In situ</i> heating SEM observation of the bainitic transformation process in Cu-17Al-11Mn (at.%) alloys. Microscopy (Oxford, England), 2016, 65, 159-168.	1.5	9
65	Numerical methods for simulating blood flow at macro, micro, and multi scales. Journal of Biomechanics, 2016, 49, 2221-2228.	2.1	33
66	Morphological and chemical analysis of bainite in Cu-17Al-11Mn (at.%) alloys by using orthogonal FIB-SEM and double-EDS STEM. Microscopy (Oxford, England), 2016, 65, 243-252.	1.5	5
67	Martensitic Transformation Behaviors with Various Ni Contents in Ti _{50-x} Ni _{40+x} Cu _{10.0} Alloys. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2015, 79, 434-440.	0.4	0
68	BCC/FCC Martensitic Transformation and Superelasticity in Fe-Based Alloys. Materia Japan, 2015, 54, 398-404.	0.1	3
69	Velocity profile of thin film flows measured using a confocal microscopy particle image velocimetry system with simultaneous multi depth position. Measurement Science and Technology, 2015, 26, 025301.	2.6	4
70	Hemodynamics in the Microcirculation and in Microfluidics. Annals of Biomedical Engineering, 2015, 43, 238-257.	2.5	29
71	Diffusive Promotion by Velocity Gradient of Cytoplasmic Streaming (CPS) in Nitella Internodal Cells. PLoS ONE, 2015, 10, e0144938.	2.5	6
72	PS8-15 Mechanics of nodal cilia in early mouse embryo(PS8: Poster Short Presentation VIII,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Technology in Biomechanics, 2015, 2015.8, 366.	0.0	0

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73	2B41 Effect of Rheological Properties on Ciliary motion and Flow in the airway. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 373-374.	0.0	0
74	PS8-14 Visualization of intestinal peristalsis of mosquito midgut by using micro X-ray imaging(PS8: Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 365.	0.0	0
75	PS1-10 Swimming behavior of a model ciliate near a fluid-air or a fluid-solid interface(PS1: Poster) Tj ETQq1 1 0.784314 rgBT /Overlock Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 231.	0.0	0
76	1A16 Numerical Simulation of the Nodal Ciliary Motion Driven by the Dynein Motor Protein. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 13-14.	0.0	0
77	2B35 Effect of aeration on the distribution of Chlamydomonas. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 371-372.	0.0	0
78	PS3-7 DEVELOPMENT OF A NUMERICAL MODEL OF CYTOSKELETON DYNAMICS(PS3: Poster Short) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Emerging Science and Technology in Biomechanics, 2015, 2015.8, 268.	0.0	0
79	1316 Flow on a ciliary respiratory epithelium. The Proceedings of the Fluids Engineering Conference, 2015, 2015, _1316-1_-_1316-2_.	0.0	0
80	OS2-2 A NUMERICAL SIMULATION OF CYTOADHESION AND ROSETTE FORMATION OF RED BLOOD CELLS INFECTED BY MALARIA(OS2: Integrated Nano-Biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 74.	0.0	0
81	PS8-13 Effect of mucous viscosity on ciliary beat in the tracheal lumen(PS8: Poster Short Presentation) Tj ETQq1 1 0.784314 rgBT /Overlock Science and Technology in Biomechanics, 2015, 2015.8, 364.	0.0	0
82	1D35 Rheology of a red blood cell suspension in a simple shear flow. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 165-166.	0.0	0
83	Effects of a vascular disrupting agent for cancer treatment on normal tissue evaluated by PIXE analysis using quantum dots. International Journal of PIXE, 2014, 24, 59-65.	0.4	1
84	Measurement of distributions of cesium and rubidium in rice grains using micro-PIXE for detailed examinations of contaminated food. International Journal of PIXE, 2014, 24, 17-27.	0.4	4
85	Hydrodynamic interaction between two red blood cells in simple shear flow: its impact on the rheology of a semi-dilute suspension. Computational Mechanics, 2014, 54, 933-941.	4.0	10
86	Numerical analysis of a red blood cell flowing through a thin micropore. Physical Review E, 2014, 89, 013008.	2.1	16
87	Feasibility of tension braces using Cu-Al-Mn superelastic alloy bars. Structural Control and Health Monitoring, 2014, 21, 1304-1315.	4.0	38
88	A full GPU implementation of a numerical method for simulating capsule suspensions. Journal of Biomechanical Science and Engineering, 2014, 9, 14-00039-14-00039.	0.3	14
89	Accumulation and localization of alkali elements in Lentinula edodes studied by PIXE analysis. International Journal of PIXE, 2014, 24, 197-204.	0.4	3
90	2E15 Numerical analysis of a red blood cell flowing through a micro flow channel. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2014, 2014.26, 439-440.	0.0	0

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91	Abnormal Grain Growth Induced by Cyclic Heat Treatment. <i>Science</i> , 2013, 341, 1500-1502.	12.6	216
92	Membrane tension of red blood cells pairwise interacting in simple shear flow. <i>Journal of Biomechanics</i> , 2013, 46, 548-553.	2.1	16
93	Studies on radioactive cesium and alkali elements in <i>lentinula edodes</i> (Shiitake) based on PIXE analysis. <i>International Journal of PIXE</i> , 2013, 23, 147-152.	0.4	3
94	Cooling-induced shape memory effect and inverse temperature dependence of superelastic stress in Co ₂ Cr(Ga,Si) ferromagnetic Heusler alloys. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	45
95	Two- and Three-Dimensional Grain Growth in the Cu–Al–Mn Shape Memory Alloy. <i>Materials Transactions</i> , 2013, 54, 2044-2048.	1.2	10
96	Experimental and Thermodynamic Studies of the FeéSi Binary System. <i>ISIJ International</i> , 2012, 52, 540-548.	1.4	75
97	Reorientation of a Nonspherical Capsule in Creeping Shear Flow. <i>Physical Review Letters</i> , 2012, 108, 138102.	7.8	43
98	Superelasticity at Low Temperatures in Cu-17Al-15Mn (at%) Shape Memory Alloy. <i>Materials Transactions</i> , 2011, 52, 1713-1715.	1.2	20
99	Micro-PIV (micro particle image velocimetry) visualization of red blood cells (RBCs) sucked by a female mosquito. <i>Measurement Science and Technology</i> , 2011, 22, 064002.	2.6	21
100	Phase Equilibria and Ternary Intermetallic Compound with L12 Structure in Co-W-Ga System. <i>Journal of Phase Equilibria and Diffusion</i> , 2009, 30, 587-594.	1.4	25
101	Role of electrolytes in the preparation of nanoparticles via the emulsion polymerization of vinyl pivalate. <i>Journal of Colloid and Interface Science</i> , 2009, 338, 480-485.	9.4	2
102	Phase Equilibria and Microstructure on γ ' Phase in Co-Ni-Al-W System. <i>Materials Transactions</i> , 2008, 49, 1474-1479.	1.2	254
103	Phase Stability of the L12 Compound and Microstructural Changes in Co-(W or Mo)-Ta Ternary Alloys. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1128, 60801.	0.1	0
104	1016 Superplasticity in Cu-Al-Mn-Based Shape Memory Alloy. <i>The Proceedings of the JSME Annual Meeting</i> , 2008, 2008.1, 45-46.	0.0	0
105	Superplasticity of Cu-Al-Mn-Ni Shape Memory Alloy. <i>Materials Transactions</i> , 2007, 48, 2914-2918.	1.2	29
106	Effect of chain transfer agents on the kinetics and mechanism of particle nucleation in the emulsion polymerization of vinyl pivalate. <i>Colloid and Polymer Science</i> , 2007, 285, 523-534.	2.1	15
107	Phase Equilibria and Phase Transition of the NiéFeéGa Ferromagnetic Shape Memory Alloy System. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007, 38, 767-776.	2.2	40
108	2115 Development of superelastic medical guidewires with functionally graded properties. <i>The Proceedings of the JSME Annual Meeting</i> , 2007, 2007.1, 167-168.	0.0	0

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109	2117 Superelasticity of Co-Ni-Al ferromagnetic shape memory alloys. The Proceedings of the JSME Annual Meeting, 2007, 2007.1, 171-172.	0.0	0
110	2116 High-Temperature Shape Memory Effect in Co-Al System. The Proceedings of the JSME Annual Meeting, 2007, 2007.1, 169-170.	0.0	0
111	Influence of additives on model emulsion polymerization of vinyl acetate (VAc) using poly(vinyl Tj ETQq1 1 0.784314 rgBT /Qverlock 10 Tf 50	2.1	7
112	Effect of additives on the initial stage of emulsion polymerization of styrene (St) using poly(vinyl Tj ETQq0 0 0 rgBT /Qverlock 10 Tf 50	2.1	9
113	Influence of Co Addition on Martensitic and Magnetic Transitions in Ni-Fe-Ga β Based Shape Memory Alloys. Materials Transactions, 2005, 46, 734-737.	1.2	38
114	Damping Properties of Ductile Cu-Al-Mn-Based Shape Memory Alloys. Materials Transactions, 2005, 46, 118-122.	1.2	29
115	Polymerization of vinyl acetate in fatty acids and properties of poly (vinyl alcohols) derived from the poly (vinyl acetates). Colloid and Polymer Science, 2005, 283, 799-804.	2.1	4
116	Surface sulfate groups on poly(methyl methacrylate) and poly(vinyl acetate) particles from soap-free emulsion polymerization. E-Polymers, 2005, 5, .	3.0	1
117	Thermosensitive poly(methyl methacrylate) emulsion prepared in the presence of poly(vinyl alcohol) with a cloud point as a protective colloid. Colloid and Polymer Science, 2004, 283, 111-116.	2.1	4
118	Martensitic Transformation and Magnetic Properties of Cu-Ga-Mn β Alloys. Materials Transactions, 2004, 45, 2780-2784.	1.2	28
119	Study on the initial stage of emulsion polymerization of vinyl acetate using poly(vinyl alcohol) as a protective colloid. Colloid and Polymer Science, 2003, 281, 337-342.	2.1	13
120	Shape Memory Effect Associated with FCC—HCP Martensitic Transformation in Co-Al Alloys. Materials Transactions, 2003, 44, 2732-2735.	1.2	19
121	Two-Way Shape Memory Effect Induced by Bending Deformation in Ductile Cu-Al-Mn Alloys. Materials Transactions, 2002, 43, 1676-1683.	1.2	29